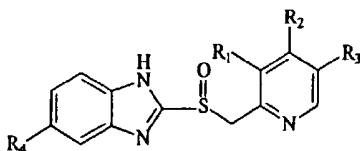


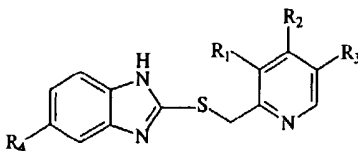
**In the Claims:**

1. (currently amended) A process for preparing a thioester compound of formula A:



A

wherein R<sub>1</sub>, R<sub>2</sub>, and R<sub>4</sub> are each selected from the group consisting of hydrogen, substituted or unsubstituted lower alkyl and substituted lower alkoxy; and R<sub>3</sub> is selected from the group consisting of hydrogen and substituted or unsubstituted lower alkyl, comprising reacting a thioether compound of formula B

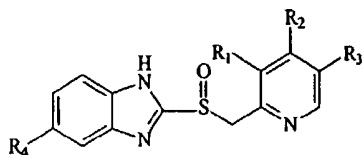


B

wherein R<sub>1</sub>, through R<sub>4</sub> are as in formula A, with an oxidizing agent selected from the group consisting of tert-butyl hydroperoxide in the presence of a catalyst, OXONE® and potassium peroxymonosulfate to produce selective oxidation of the thioether compound of formula B to form the thioester compound of formula A.

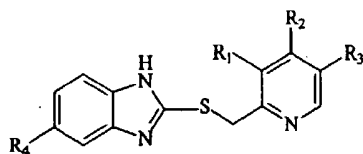
2. (original) The process according to claim 1, wherein the oxidation is performed at a temperature from about 10°C to about 30°C.
3. (original) The process according to claim 1, wherein the oxidation is performed for about 2 hours to about 10 hours.

4. (previously presented) A process for preparing a thioester compound of formula A:



A

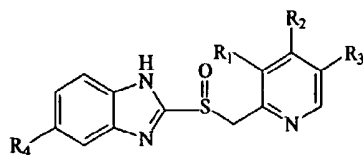
wherein R<sub>1</sub> is methyl, R<sub>2</sub> is methoxy; R<sub>3</sub> is methyl; and R<sub>4</sub> is methoxy, comprising reacting a thioether compound of formula B



B

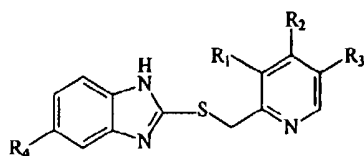
wherein R<sub>1</sub> through R<sub>4</sub> are as in formula A, with an oxidizing agent to produce selective oxidation of the thioether compound of formula B to form the thioester compound of formula A.

5. (previously presented) A process for preparing a thioester compound of formula A:



A

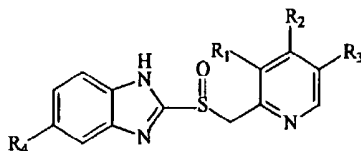
wherein R<sub>1</sub> is methyl; R<sub>2</sub> is 2-trifluoroethoxy; R<sub>3</sub> is hydrogen; and R<sub>4</sub> is hydrogen, comprising reacting a thioether compound of formula B



B

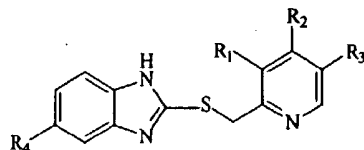
wherein R<sub>1</sub> through R<sub>4</sub> are as in formula A, with an oxidizing agent to produce selective oxidation of the thioether compound of formula B to form the thioester compound of formula A.

6. (previously presented) A process for preparing a thioester compound of formula A:



A

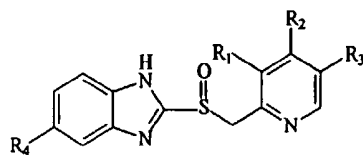
wherein R<sub>1</sub> is methoxy; R<sub>2</sub> is methoxy; R<sub>3</sub> is hydrogen; and R<sub>4</sub> is difluoromethoxy, comprising reacting a thioether compound of formula B



B

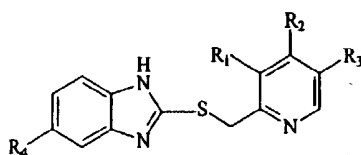
wherein R<sub>1</sub> through R<sub>4</sub> are as in formula A, with an oxidizing agent to produce selective oxidation of the thioether compound of formula B to form the thioester compound of formula A.

7. (previously presented) A process for preparing a thioester compound of formula A:



A

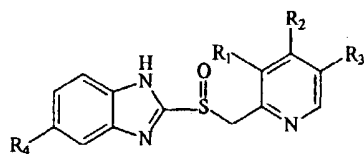
wherein  $R_1$  is methyl;  $R_2$  is  $\text{MeOCH}_2\text{CH}_2\text{CH}_2\text{O}$ ;  $R_3$  is hydrogen; and  $R_4$  is hydrogen, comprising reacting a thioether compound of formula B



B

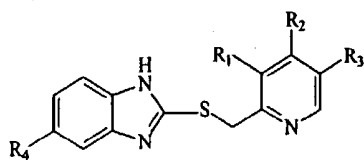
wherein  $R_1$  through  $R_4$  are as in formula A, with an oxidizing agent to produce selective oxidation of the thioether compound of formula B to form the thioester compound of formula A.

8. (previously presented) A process for preparing a thioester compound of formula A:



A

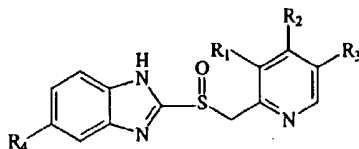
wherein  $R_1$ ,  $R_2$ , and  $R_4$  are each selected from the group consisting of hydrogen, substituted or unsubstituted lower alkyl and substituted lower alkoxy; and  $R_3$  is selected from the group consisting of hydrogen and substituted or unsubstituted lower alkyl, comprising reacting a thioether compound of formula B



B

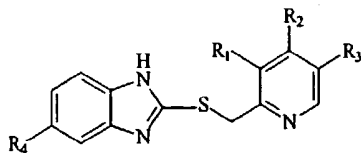
wherein  $R_1$  through  $R_4$  are as in formula A, with tert-butyl hydroperoxide in the presence of a catalyst to produce selective oxidation of the thioether compound of formula B to form the thioester compound of formula A.

9. (previously presented) A process for preparing a thioester compound of formula A:



A

wherein  $R_1$ ,  $R_2$ , and  $R_4$  are each selected from the group consisting of hydrogen, substituted or unsubstituted lower alkyl and substituted lower alkoxy; and  $R_3$  is selected from the group consisting of hydrogen and substituted or unsubstituted lower alkyl, comprising reacting a thioether compound of formula B



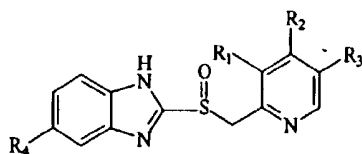
B

wherein  $R_1$  through  $R_4$  are as in formula A, with tert-butyl hydroperoxide in the presence of a catalyst to produce selective oxidation of the thioether compound of formula B to form the thioester compound of formula A, wherein the catalyst is selected from the group consisting of vanadyl bisacetylacetonate, sodium meta-vanadate and vanadium pentoxide

10. (previously presented) The process according to claim 8, wherein the molar ratio of

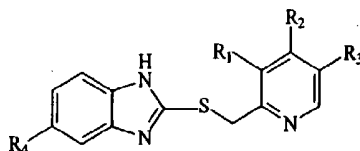
tert-butyl hydroperoxide to the compound of formula B is in the range of about 1.15 to about 4.5.

11. (previously presented) A process for preparing a thioester compound of formula A:



A

wherein  $R_1$ ,  $R_2$ , and  $R_4$  are each selected from the group consisting of hydrogen, substituted or unsubstituted lower alkyl and substituted lower alkoxy; and  $R_3$  is selected from the group consisting of hydrogen and substituted or unsubstituted lower alkyl, comprising reacting a thioether compound of formula B

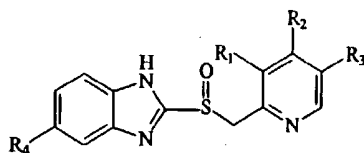


B

wherein  $R_1$  through  $R_4$  are as in formula A, with tert-butyl hydroperoxide in the presence of vanadyl bis-acetylacetonate to produce selective oxidation of the thioether compound of formula B to form the thioester compound of formula A,

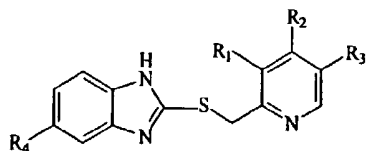
12. (previously presented) The process of claim 11, wherein the vanadyl bis acetylacetonate and the compound of formula B is in the molar ratio of about 0.01 to about 0.6.
13. (original) The process according to any one of claims 8-12, wherein the oxidation is performed in an organic solvent.
14. (original) The process according to claim 13, wherein the organic solvent is selected from the group consisting of toluene, lower alkanols and ethyl acetate.
15. (original) The process according to claim 13, wherein the oxidation is performed in an organic solvent in the presence of water.

16. (previously presented) The process according to claim 1, wherein the oxidizing agent is OXONE<sup>®</sup>.
17. (previously presented) The process according to claim 16, wherein the molar ratio between OXONE<sup>®</sup> and the compound of formula B is about 1.25-1.6 to about 1.
18. (previously presented) The process according to claim 16, wherein the molar ratio between OXONE<sup>®</sup> and the compound of formula B is about 1.4-1.6 to about 1.
19. (currently amended) The process according to claim 16, wherein the oxidation is performed ~~of~~ in an aqueous organic solvent.
20. (previously presented ) The process according to claim 16, wherein the oxidation is performed in the presence of at least one solvent wherein the solvent is selected from the group consisting of acetone, methanol and a mixture thereof.
21. (original) A process according to claim 16, wherein the oxidation is performed in about 5% aqueous methanol.
22. (previously presented) A process for preparing a thioester compound of formula A:



A

wherein R<sub>1</sub>, R<sub>2</sub>, and R<sub>4</sub> are each selected from the group consisting of hydrogen, substituted or unsubstituted lower alkyl and substituted lower alkoxy; and R<sub>3</sub> is selected from the group consisting of hydrogen and substituted or unsubstituted lower alkyl, comprising reacting a thioether compound of formula B



B

wherein R<sub>1</sub> through R<sub>4</sub> are as in formula A, with OXONE<sup>®</sup> to produce selective oxidation of the thioether compound of formula B to form the thioester compound of formula A,

wherein the oxidation is performed in a two-phase system selected from (CH<sub>2</sub>Cl<sub>2</sub>/H<sub>2</sub>O) and (ethyl acetate/H<sub>2</sub>O)

23. (currently amended) The process of claim 22, wherein the oxidation is performed in the presence of a phase-transfer catalyst.
24. (previously presented ) The process of claim 23, wherein the phase-transfer catalyst is tert-butyl ammonium bromide.
25. (currently amended) ~~Omeprazole~~ Omeprazole having less than about 4.5% sulfone prepared with a process according to as in any one of claims 1, 4 or 8, wherein the omeprazole has less than about 4.5% of a sulfone by-product.
26. (currently amended) ~~Lansoprazole having less than about 4.5% sulfone prepared with a process according to as in any one of claims 1, 5 or 8, wherein the lansoprazole has less than about 4.5% of a sulfone by-product.~~
27. (currently amended) ~~Pantoprazole having less than about 4.5% sulfone prepared with a process according to as in any one of claims 1, 6 or 8, wherein the pantoprazole has less than about 4.5% of a sulfone by-product.~~
28. (currently amended) ~~Rabeprazole having less than about 4.5% sulfone prepared with a process according to as in any one of claims 1, 7 or 8, wherein the rabeprazole has less than about 4.5% of a sulfone by-product.~~
29. (previously presented) The process according to claim 1, wherein the oxidizing agent is potassium peroxymonosulfate.
30. (previously presented) The process according to claim 29, wherein the molar ratio between potassium peroxymonosulfate and the compound of formula B is about 1.25-1.6 to about 1.
31. (previously presented) The process according to claim 29, wherein the molar ratio between potassium peroxymonosulfate and the compound of formula B is about 1.4 to about 1.6 to about 1.
32. (previously presented) The process according to claim 29, wherein the oxidation is performed in an aqueous solution.
33. (previously presented) The process according to claim 29, wherein the oxidation is performed in the presence of at least one solvent wherein the solvent is selected from the group consisting of acetone, methanol and a mixture thereof.



34. (previously presented) The process according to claim 29, wherein the oxidation is performed in about 5% aqueous methanol.
35. (previously presented) The process according to claim 29, wherein the oxidation is performed in a two-phase system selected from  $\text{CH}_2\text{Cl}_2/\text{H}_2\text{O}$  and ethyl acetate/ $\text{H}_2\text{O}$
36. (currently amended) The process according to claim 29, wherein the oxidation is performed in the presence of a phase-transfer catalyst.
37. (currently amended) The process according to claim 29 36, wherein the phase transfer catalyst is tert-butyl ammonium bromide.
38. (previously presented) The process according to claim 29, wherein the oxidation is performed at a temperature between about  $-10^\circ\text{C}$  to about  $30^\circ\text{C}$ .
39. (previously presented) The process according to claim 29, wherein the oxidation is performed over a time period of about 2 to about 10 hours.
40. (previously presented) The process according to 14, wherein the organic solvent is toluene.
41. (previously presented) The process according to 14, wherein the organic solvent is isopropanol.
42. (previously presented) The process according to claim 1, wherein the oxidation is performed at a temperature between about  $-10^\circ\text{C}$  to about  $30^\circ\text{C}$ .
43. (previously presented) The process according to claim 1, wherein the oxidation is performed over a time period of about 2 to about 10 hours.
44. (previously presented) The process according to claim 16, wherein the oxidation is performed at a temperature between about  $-10^\circ\text{C}$  to about  $30^\circ\text{C}$ .
45. (previously presented) The process according to claim 16, wherein the oxidation is performed over a time period of about 2 to about 10 hours.
46. (previously presented) The process according to claim 14, wherein the oxidation is performed at a temperature between about  $-10^\circ\text{C}$  to about  $30^\circ\text{C}$ .
47. (previously presented) The process according to claim 14, wherein the oxidation is performed over a timer period of about 2 to about 10 hours.
48. (previously presented) The process according to claim 1, wherein the tert-butyl hydroperoxide is dry.
49. (previously presented) The process according to claim 1, wherein the tert-butyl

hydroperoxide is aqueous.

50. (currently amended) The process according to claim 1, wherein the thioester compound ~~for~~ of formula A produced by the oxidizing agent of tert-butyl hydroperoxide ~~having~~ has less than about 4.5% of a sulfone by-product.
51. (currently amended) The process according to claim 1, wherein the thioester compound ~~for~~ of formula A produced by the oxidizing agent of OXONE<sup>®</sup> or potassium peroxymonosulfate ~~having~~ has less than about 0.5% of a sulfone by-product.
52. (currently amended) The process according to claim 1, wherein the thioester compound ~~for~~ of formula A produced by the oxidizing agent of OXONE<sup>®</sup> or potassium peroxymonosulfate ~~having~~ has less than about 0.2% of a sulfone by-product.
53. (currently amended) ~~Omeprazole~~ Omeprazole ~~having less than about 0.5% sulfone~~ prepared with a process according to as in any one of claims 1, 4, 16 or 29, wherein the omeprazole contains less than about 0.5% of a sulfone by-product.
54. (currently amended) ~~Lansoprazole having less than about 0.5% sulfone~~ prepared with a process according to as in any one of claims 1, 5, 16 or 29, wherein the lansoprazole contains less than about 0.5% of a sulfone by-product.
55. (currently amended) ~~Pantoprazole having less than about 0.5% sulfone~~ prepared with a process according to as in any one of claims 1, 6, 16 or 29, wherein the pantoprazole contains less than about 0.5% of a sulfone by-product.
56. (currently amended) ~~Rabeprazole having less than about 0.5% sulfone~~ prepared with a process according to as in any one of claims 1, 7, 16 or 29, wherein the rabeprazole contains less than about 0.5% of a sulfone by-product.
57. (currently amended) ~~Omeprazole~~ Omeprazole ~~having less than about 0.2% sulfone~~ prepared with a process according to as in any one of claims 1, 4, 16 or 29, wherein the omeprazole contains less than about 0.2% of a sulfone by-product.
58. (currently amended) ~~Lansoprazole having less than about 0.2% sulfone~~ prepared with a process according to as in any one of claims 1, 5, 16 or 29, wherein the lansoprazole contains less than about 0.2% of a sulfone by-product.
59. (currently amended) ~~Pantoprazole having less than about 0.2% sulfone~~ prepared with a process according to as in any one of claims 1, 6, 16 or 29, wherein the pantoprazole contains less than about 0.2% of a sulfone by-product.

60. (currently amended) Rabep~~razole~~ ~~having less than about 0.2% sulfone~~ prepared with a process according to as in any one of claims 1, 7, 16 or 29, wherein the rabep~~razole~~ contains less than about 0.2% of a sulfone by-product.
61. (currently amended) A pharmaceutical composition comprising ~~omeprazole~~ ~~omerprazole~~, wherein the ~~omerprazole~~ omeprazole contains less than about 4.5% of a sulfone by-product.
62. (currently amended) A pharmaceutical composition comprising lansoprazole, wherein the lansoprazole contains less than about 4.5% of a sulfone by-product.
63. (currently amended) A pharmaceutical composition comprising pantoprazole, wherein the pantoprazole contains less than about 4.5% of a sulfone by-product.
64. (currently amended) A pharmaceutical composition comprising rabep~~razole~~, wherein the rabep~~razole~~ contains less than about 4.5% of a sulfone by-product.